



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,643	09/15/2003	Kenneth K. Smith	200207341-1	9394
22879	7590	01/25/2005	EXAMINER	
HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			LUU, PHO M	
			ART UNIT	PAPER NUMBER
			2824	

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/662,643

Applicant(s)

SMITH ET AL.

Examiner

Pho M Luu

Art Unit

2824

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 17-39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☒ Claim(s) 14-16 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: Search History.

DETAILED ACTION

Reply to Election/Restrictions

1. Applicant's election without traverse of Group I, Claims 1-16 filed 17 November 2004 is acknowledged. The changes and remarks disclosed therein were considered.
2. Claims 17-39 have been canceled.
3. Claims 1-16 are pending in the application.

Specification

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

5. The abstract of the disclosure is objected to because it uses the phrase “**is disclosed. In some embodiments**” in lines 1-2, which is implied. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claim 1-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Hartmann. (US. 2002/0018360).

Regarding claim 1 and 12-13, Hartmann in Figures 1-5 discloses a method of determining the value of a memory element (memory cell array 1, Figure 1) within a plurality of memory elements (MC, Figure 1) comprising:

selecting a column (WL2, Figure 4) of interest containing a desired memory element (MC10-MC12, Figure 4);

disabling the desired memory element (memory cell MC10 in Figure 4, the WL2 connected to a current source Q drive a current I in the WL2, the MC11-MC12 are disconnected) to measuring a first current provided to the column of interest (the data signal is written to the memory cell MC10 only, see column 2, paragraph 0028, lines 12-14) and adjusting measurement circuitry to compensate for skew introduced by undersired memory element (see column 2, paragraph 0028, lines 1-19);

enabling the desired memory element (MC10-MC12 are written to different extent by the current source Q with the locally different current) and measuring a second current provided to the column of interest (see column 2, paragraph 0029 through column 3, paragraph 0030, lines 1-8).

With respected to claim 2, Hartmann in Figures 1-5 disclosed that the memory element comprises magnetic memory elements (see column 1, paragraph 0007, lines 5-8).

With respected to claim 3, Hartmann in Figures 1-5 disclosed that the memory element further comprise magneto resistive memory element (MRAM in Figure 1 is magnetoresistive, see column 2, paragraph 0024, lines 4-7).

With respected to claim 4, Hartmann in Figures 1-5 disclosed that the selection a column (WLm, WL2-WL0 in Figure 1) of interest includes coupling voltage to various column (inherence, the supply voltage apply through the circuit, see column 2, paragraph 2, lines 1-7).

With respected to claim 5, Hartmann in Figures 1-5 disclosed that disabling the desired memory element includes coupling the desired memory to a high impedance state (see column 1, paragraph 0005, lines 6-8).

With respected to claim 6, Hartmann in Figures 1-5 disclosed that disabling the desired memory element includes coupling the desired memory element to a known voltage (inherence, the voltage apply in circuit such as well known voltage).

With respected to claim 7-10, Hartmann in Figures 1-5 disclosed that the current is measured using read circuit coupled to the column of interest (see column 2, paragraph 0026).

With respected to claim 11, Hartmann in Figures 1-5 disclosed that enabling includes coupled the desired memory element to ground (inherence, the MC10-MC12, each of element connected to ground in circuit).

Allowable Subject Matter

8. Claims 14-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 14, the prior art of record do not disclose or suggest a digital value of the memory elements is indicated by the peak value of the derivative.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Baker (US 2004/0032760) disclosed a method of memory element including a first and second current during a first sensing time and subtracted from a third current during a second sensing time.


Art Unit: 2824

11. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Pho M. Luu whose telephone number is 571.272.1876. The examiner can normally be reached on M-F 8:00AM – 5:00PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor, Richard Elms, can be reached on 571.272.1869. The official fax number for the organization where this application or proceeding is assigned is 703.872.9306 for all official communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PML
18 January 2005



VANTHU NGUYEN
PRIMARY EXAMINER